GENITOURINARY SYSTEM

www.kdhe.state.ks.us/c-f/special_needs_part2.html

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Urinary System[1]

STRUCTURE AND FUNCTION

The urinary system filters water and waste material from the blood and removes it from the body as urine.

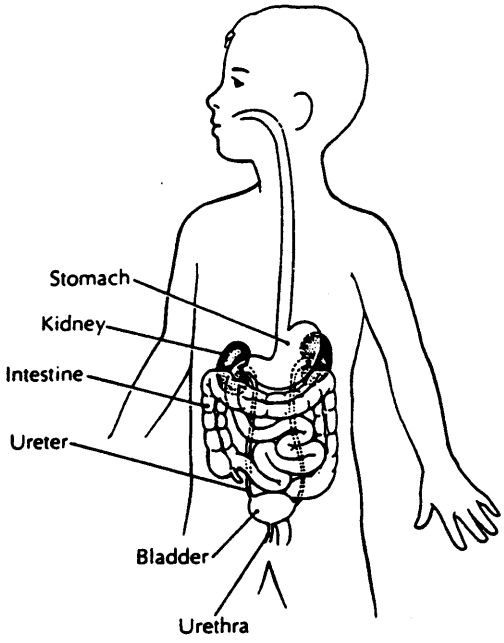
The *kidneys* are two fist-size organs, one on each side of the spine at the back of the upper abdomen, that regulate the amount of water in the body. Ninety percent of the water that the kidneys remove from the blood is recycled back into the blood after waste is filtered out. The kidneys also regulate blood pressure, growth, calcium absorption, and red blood cell production.

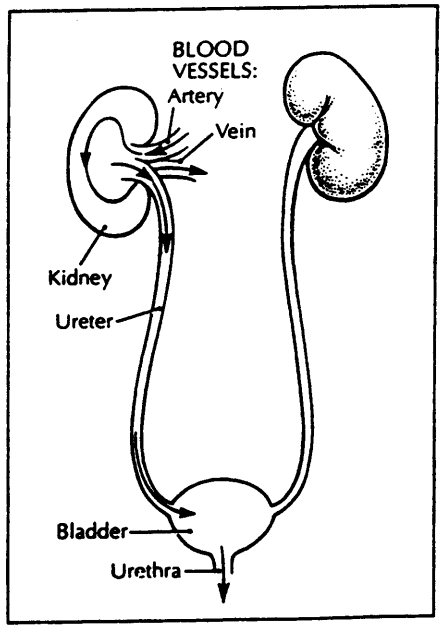
The *blood vessels* include renal arteries that carry blood from the main artery to the kidneys, where waste is filtered out, and the renal veins that take cleansed blood away from the kidneys.

Ureters are narrow tubes that carry the urine from the kidneys to the bladder.

The *bladder* is a reservoir for storing the urine until it is ready to be discharged from the body.

The *urethra* is a tube leading from the bladder to the outside opening of the body through which urine is discharged, and the *meatus* is the external opening where urine comes out. In girls, it is between the labia, just above the vagina; and in boys, it is at the tip of the penis.





PURPOSE

Clean intermittent catheterization (CIC) is a generally clean procedure used to empty the bladder. Infrequently, the procedure may require sterile technique depending on student-specific needs. CIC helps prevent urinary tract infections in students who have difficulty emptying their bladders. When the bladder remains filled with stagnant urine for long periods of time, rapid bacterial growth and infection may result. Catheterizing the bladder every few hours eliminates urine before bacteria can multiply to cause an infection. CIC also prevents wetting caused by overflow incontinence, a condition in which urine overflows the bladder and dribbles out the urethra.

CIC is often used when the nerves that stimulate the bladder do not function properly. For instance, a condition called *neurogenic bladder* is associated with myelodysplasia (i.e., spina bifida) and other conditions in which the nerves from the spinal cord to the bladder are damaged (e.g., spinal injuries resulting from accidents). Because of nerve damage, the bladder is completely or partially unable to empty, which can lead to the following:

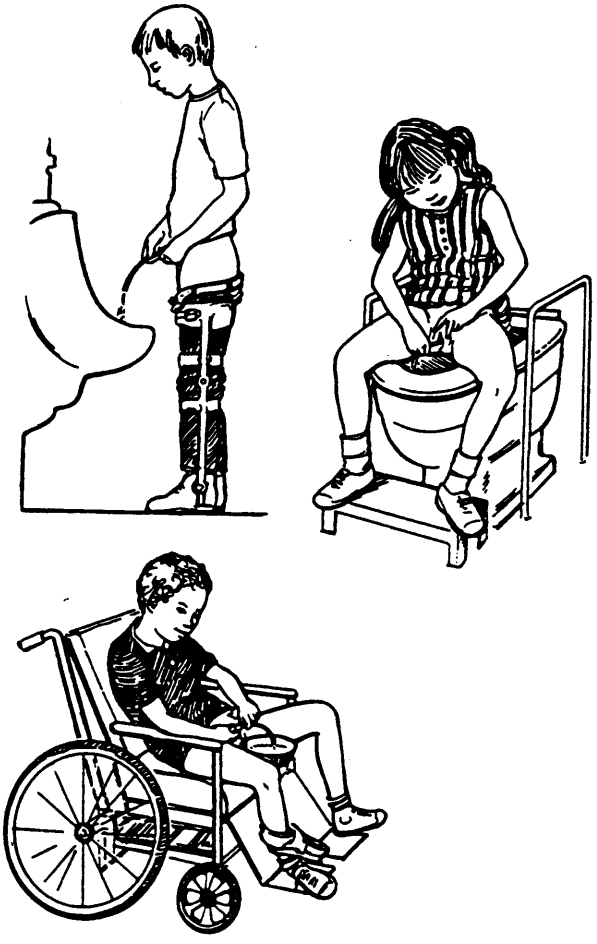
- Risk of infection
- Possible backup of urine to the kidney resulting in kidney damage
- Incontinence (i.e., lack of control of urine leading to wetting)

SUGGESTED SETTINGS

CIC can be done in regular bathroom facilities in the home, school, or hospital. CIC also may be done in the nurse's office or any other facility where the student is ensured privacy. If recommended sites are not private, appropriate accommodations (e.g., screens, doors) should be made.

If toilet facilities are used by the student, those facilities must be wheelchair accessible and should have railings or supports for the student who needs assistance.

Some students may need to lie down while being catheterized—a cot or bed in the health room would be appropriate.



SUGGESTED PERSONNEL AND TRAINING

A health assessment must be completed by the school nurse. State nurse practice regulations should be consulted for guidance on delegating health care procedures.

An adult with proven competency-based training in appropriate techniques and problem management can do this procedure safely and effectively. All students should be encouraged to learn the procedure and do it themselves, if able. It is

important to recognize that if a student does self-catheterization, he or she may still need some supervision. School personnel who have regular contact with the student who requires CIC should receive general training that covers the student's specific health care needs, potential problems, and how to implement the established emergency plan.

The basic skills checklist on pages 9-10, 13-14 can be used as a foundation for competency-based training in appropriate techniques. It outlines specific procedures step by step. Once the procedures have been mastered, the completed checklist serves as documentation of training.

THE INDIVIDUALIZED HEALTH CARE PLAN: ISSUES FOR SPECIAL CONSIDERATION

Each student's IHCP must be tailored to the individual's needs. The following section covers the procedure for CIC and possible problems and emergencies that may arise. It is essential to review it before writing the IHCP.

A sample plan is included in this manual. It may be copied and used to develop a plan for each student. For a student who requires catheterization, the following items should receive particular attention:

- Medications that would affect urine color, amount, and odor
- Flexible timing of catheterization to accommodate classroom schedule, field trips, and other school events
- Fostering independence in performing the procedure, depending on the student's developmental ability
- An extra set of clothing in the educational setting
- Individual baseline status, including urine color, amount, and pattern of continence
- Position of student during catheterization
- Student's history of urinary tract infections
- Student's ability to self-catheterize (The student who is capable of self-care should have ready access to his or her equipment and a clean, private bathroom with a sink.)
- Student's need of assistance with clothing and leg braces
- Whether procedure is to use clean or sterile technique
- Latex allergy alert
- Universal precautions (Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.)

Possible Problems that Require Immediate Attention

Observations	***Reason/Action***
Bleeding from urethra	*This may be due to trauma to the urethra or urinary tract infection. Discontinue catheterization. Contact family and physician.*
Inability to pass catheter	*This may be due to increased sphincter tone caused by anxiety or spasm. Encouraging the child to relax (i.e., breathe deeply) may be helpful.* *In boys: Reposition the penis and use gentle but firm pressure until the sphincter relaxes. Sometimes it helps to have boys flex at hips to decrease reflex resistance of bladder sphincter.* *In girls: Check catheter placement. The catheter may be in the vagina. If catheter is in the vagina, do not reinsert; use a clean catheter.* *If unsuccessful, notify family or physician for further instructions.*
No urine as a result of catheterization	*This may be due to improper placement of catheter or the bladder may be empty. Check position of catheter.*
Cloudy urine, mucus, blood, foul odor, color changes, or unusual wetting between catheterizations	*This may be due to a urinary tract infection. Always report to family any changes in the student's usual pattern or tolerance of procedure.*

General Information Sheet

Students Who Use Clean Intermittent Catheterization

Dear (teacher, lunch aide, bus driver):

_____ [Student's name] has a condition that requires clean intermittent catheterization (CIC). CIC is a simple and safe procedure that helps the student empty his or her bladder because the bladder is unable to empty on its own. This helps to prevent wetness or urinary infections.

The student or another person empties the bladder by putting a clean, small tube (i.e., catheter) into the bladder and letting the urine drain out. This should be done in a clean, private space, preferably in the bathroom or in the health room. Most students need to do this every 4–6 hours during the day.

Unless the student has a condition that otherwise would interfere with his or her participation in physical education or other school activities, there is no reason why he or she cannot participate fully. Special consideration may need to be given to the timing of catheterization, based on the student's schedule, for field trips or other activities during which the student may not have access to a bathroom. This procedure should be done in a private place.

The following staff members have been trained to deal with any problems that may arise with this student:

_____

_____

_____

For more information about this procedure or the student's needs, consult the school nurse or the family.

Procedure for Clean Intermittent Catheterization—Male

PROCEDURE	*POINTS TO REMEMBER*
1. Wash hands.	*Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.*
2. Assemble equipment:	*If the student does the procedure unassisted, gloves are not needed.*

- Water-soluble lubricant (e.g., K-Y jelly, Lubrifax, Surgel)
- Catheter (e.g., plastic, polyvinylchloride, metal)
- Wet wipes or cotton balls (nonsterile) plus mild soap and water or student-specific cleansing supplies
- Storage receptacle for catheter
- Container for urine or toilet
- Gloves (if person other than student does procedure)

3. Explain the procedure to the student at his level of understanding. Have him do as much of the procedure as he is capable of, with supervision as needed.

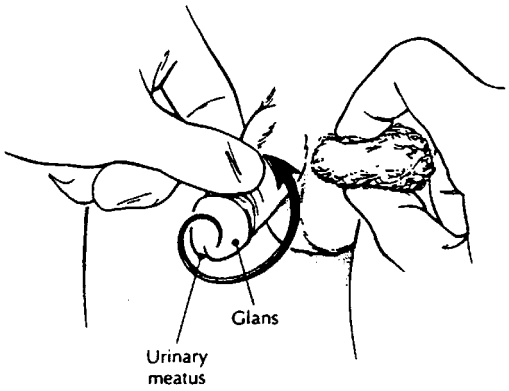
By encouraging the student to assist in the procedure, the caregiver helps him achieve maximum self-care skills.

4. Position the student.

The student may be catheterized lying down, standing, or sitting. If able, he may stand at the toilet. If unable to sit or stand, he may lie on his back. This procedure requires a receptacle to catch the flow of urine from the catheter.

5. Wash hands and put on gloves.
6. Show the student, depending on his age, the location of the urethral opening.
7. Lubricate the tip of the catheter with a water-soluble lubricant and place on clean surface.

8. Cleanse the penis in the following manner:
   a. Hold the penis below the glans at a 45- to 90-degree angle from the abdomen depending on position of student or student-specific guidelines.
   b. If the student is not circumcised, retract the foreskin.



   c. Wash the glans with soapy cotton balls or student-specific cleansing supplies. Begin at the urethral opening, and, in a circular manner, wash away from the meatus. Repeat twice for a total of three washings. Use a clean cotton ball each time you wash the penis.

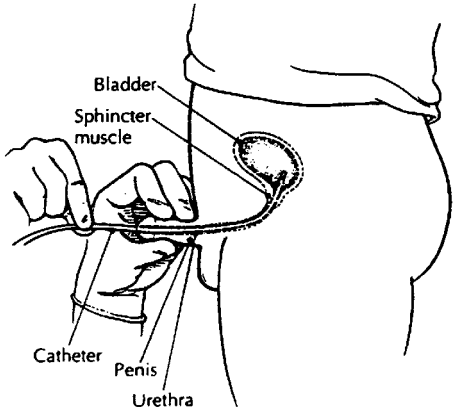
Always start at the meatus and wash toward the base of the penis. This helps remove bacteria from the area.

9. Locate the urethral opening. Hold the penis at a 45- to 90-degree angle from the abdomen, depending on position of student or student-specific guidelines. Insert catheter gently into the urethral opening. Some resistance may be met at the bladder sphincter. Use gentle but firm pressure until the sphincter relaxes. Encouraging the child to relax (i.e., breathe deeply) may also be helpful.

Do not force catheter. If you feel unusual resistance, notify the family. *Make sure the other end of the catheter is either in a receptacle or over the toilet to catch urine.*

10. Insert the catheter until there is a good flow of urine. When the flow stops, insert catheter slightly more and then withdraw a little to make sure all urine is drained. Rotate the catheter so that catheter openings have reached all areas of the bladder.

It is also helpful to have the student bear down a couple of times while the catheter is in place. If trained to do so, apply external manual pressure to encourage the urine flow until the flow stops. This must be done with the catheter in place.



11. When bladder is emptied, pinch catheter and withdraw. (If using metal catheter, put finger over end.)

This prevents urine still in the catheter from flowing back into the bladder during withdrawl.

12. If the student is not circumcised, pull the foreskin over the glans when finished.
13. Remove gloves and wash hands.
14. Assist student in dressing.
15. Put on gloves.
16. Measure and record the urine volume if ordered. Dispose of urine, clean equipment, and store in appropriate container.

Examples of storage receptacles include a sealed plastic bag, a urine specimen container, and a pencil case. The used catheter(s) should be sent home with student to be cleaned.

17. Wash hands.
18. Document on log sheet that the procedure was done.

Report to the family any change (e.g., cloudy urine, mucus, blood, foul odor, color changes, unusual wetting between catheterizations; these may be signs of infection). 2

Student's name: _____

Person trained: _____

Position: _____

Clean Intermittent Catheterization—Male
Skills Checklist

Instructor: _____

Explanation/Return Demonstration	Expl./ Demo. Date	Explanation/Return Demonstration					
		Date	Date	Date	Date	Date	Date
A. States name and purpose of procedure							
B. Preparation:							
1. Identifies student's ability to participate in procedure							
2. Reviews universal precautions							
3. Completes at _____ time(s) (in emergency complete earlier rather than later)							
4. Completes where _____ (consider privacy and access to bathroom)							
5. Position for catheterization: _____							
6. Identifies body parts:							
a. Scrotum							
b. Foreskin							
c. Meatus							
d. Glans							
7. Identifies possible problems and appropriate actions							
C. Identifies supplies:							
1. Water-soluble lubricant							
2. Type of catheter							
3. Wet wipes or cotton balls							
4. Cleansing supplies							
5. Storage receptacle for catheter							
6. Container for urine							
7. Gloves							
D. Procedure:							
1. Washes hands							
2. Gathers equipment							
3. Arranges equipment for procedure							
4. Positions student and explains procedure							
5. Washes hands, puts on gloves							
6. Lubricates catheter and places on clean surface							
7. Cleans:							
a. Prepares cleaning materials							
b. Retracts foreskin (if needed)							

(continued)

Format adapted from Children's Hospital Chronic Illness Program, Ventilator Assisted Care Program. (1987). *Getting it started and keeping it going: A guide for respiratory home care of the ventilator assisted individual.* New Orleans, LA: Author; adapted by permission.

Clean Intermittent Catheterization—Male
Skills Checklist

Student's name: _____

Explanation/Return Demonstration	Expl./ Demo. Date	Explanation/Return Demonstration					
		Date	Date	Date	Date	Date	Date
c. Holds penis at 45-degree–90-degree angle from the abdomen							
d. Pulls penis straight							
e. Cleans meatus and glans							
f. Uses swab only once							
g. Wipes a minimum of three times							
8. Grasps catheter about 4 inches from tip							
9. Inserts well-lubricated catheter into penis with consistent pressure (if muscle spasm occurs, stop momentarily and then again use slow even pressure) **Never force a catheter.**							
10. When urine flow stops, inserts slightly more and withdraws a little							
11. Rotates catheter so all catheter openings reach all bladder areas							
12. Allows urine to flow by gravity into the shallow pan or toilet							
Student-Specific (Steps 13–15 need to be individualized for each student.)							
13. If ordered, gently press bladder to help empty							
14. Pinches catheter and withdraws slowly when urine stops flowing							
15. If not circumcised, pulls foreskin over glans							
16. Removes gloves and washes hands							
17. Assists student in dressing							
18. Puts on gloves, measures and records urine volume, disposes of urine, and cleans equipment and stores in home container							
19. Washes hands							
20. Documents procedure and observations							
21. Reports any changes to family							

Checklist content approved by:

Parent/Guardian signature _____ Date _____

Procedure for Clean Intermittent Catheterization—Female

PROCEDURE

1. Wash hands.

2. Assemble equipment:

POINTS TO REMEMBER

Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.

If the student does the procedure unassisted, gloves are not needed.

Lubricant | Catheter | Cleansing supplies | Catheter storage bag | Container | Gloves

- Water-soluble lubricant (K-Y jelly, Lubrifax, Surgel)
- Catheter (e.g., plastic, polyvinylchloride, metal)
- Wet wipes or cotton balls (nonsterile) plus mild soap and water or student-specific cleansing supplies
- Storage receptacle for catheter
- Container for urine or toilet
- Gloves (if person other than student does procedure)
- Mirror (if student normally uses)

3. Explain the procedure to the student at her level of understanding. Have her do as much of the procedure as she is capable of, with supervision as needed.

By encouraging the student to assist in the procedure, the caregiver helps her achieve maximum self-care skills.

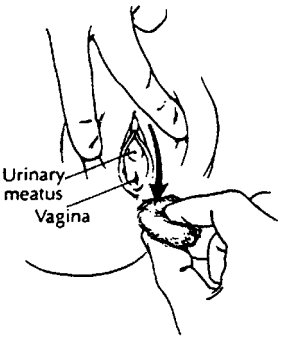
4. Position the student.

The student may be catheterized lying down or sitting. If able, she may sit on the toilet with legs straddled. A student unable to sit may lie on her back. This procedure requires a receptacle to catch the flow of urine from the catheter.

5. Wash hands and put on gloves.
6. Use a mirror to show the student, depending on her age, the location of the urethral opening.

7. Lubricate the tip of the catheter with a water-soluble lubricant. Place on clean surface.

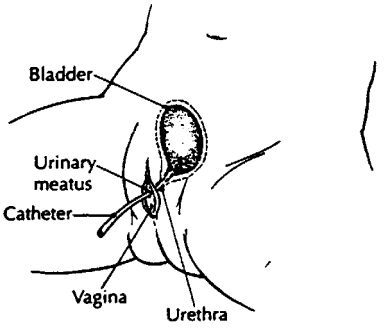
8. Separate the labia (i.e., vaginal lips) and hold open with fingers. Cleanse in a direction from the top of the labia toward the rectum. Wash three times: once down each side and once down the middle. Use a clean cotton ball each time.



9. Locate the urinary meatus (opening). Gently insert the catheter until there is urine.
10. When urine flow stops, insert catheter slightly more. If no more urine is obtained, withdraw it slightly and rotate catheter so that catheter openings have reached all areas of the bladder.

The female urethra is short and straight. Keep the other end of the catheter over the toilet or the receptacle.

It is also helpful to have the student bear down a couple of times to ensure that all urine has been drained completely. If trained to do so, apply manual external pressure until the urine stops flowing. This must be done with the catheter in place.



11. When bladder is completely empty, pinch catheter and withdraw. (If using metal catheter, put finger over end.)
12. Remove gloves and wash hands.
13. Assist student in dressing.
14. Put on gloves.
15. Measure and record the urine volume if ordered. Dispose of urine, clean equipment, and store in appropriate container.

This prevents urine still in catheter from flowing back into the bladder during withdrawal.

Examples of storage receptacles include a sealed plastic bag, a urine specimen container, a pencil case, and a cosmetic bag. The used catheter(s) should be sent home with student to be cleaned.

16. Wash hands.
17. Document on log sheet that the procedure was done.

Report to the family any change (e.g., cloudy urine, mucus, blood, foul odor, color changes, unusual wetting between catheterizations; these may be signs of infection).

Clean Intermittent Catheterization—Female
Skills Checklist

Student's name: _____

Person trained: _____

Position: _____

Instructor: _____

Explanation/Return Demonstration	Expl./ Demo. Date	Explanation/Return Demonstration					
		Date	Date	Date	Date	Date	Date
A. States name and purpose of procedure							
B. Preparation:							
1. Identifies student's ability to participate in procedure							
2. Reviews universal precautions							
3. Completes at _____ time(s) (in emergency, complete earlier rather than later)							
4. Completes where _____ (consider privacy and access to bathroom)							
5. Position for catheterization: _____							
6. Identifies body parts:							
a. Labia majora							
b. Labia minora							
c. Meatus							
d. Urethra							
7. Identifies possible problems and appropriate actions							
C. Identifies supplies:							
1. Lubricant (water soluble)							
2. Type of catheter							
3. Wet wipes or cotton balls							
4. Cleansing supplies							
5. Storage receptacle for catheter							
6. Container for urine							
7. Gloves							
8. Mirror							
D. Procedure:							
1. Washes hands							
2. Gathers equipment							
3. Arranges equipment for procedure							
4. Positions student and explains procedure							
5. Washes hands, puts on gloves							
6. Lubricates catheter and places on clean surface							
7. Cleans:							
a. Prepares cleaning materials							

(continued)

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Clean Intermittent Catheterization—Female
Skills Checklist

Student's name: _____

Explanation/Return Demonstration	Expl./ Demo. Date	Explanation/Return Demonstration					
		Date	Date	Date	Date	Date	Date
b. Opens labia minora and majora							
c. Cleans from front of folds to back of meatus							
d. Uses swab only once							
e. Wipes a minimum of three times							
8. Grasps catheter about 3 inches from tip							
9. Inserts into urethra until urine begins to flow							
10. Advances ½ inch more							
11. Rotates catheter so all catheter openings reach all bladder areas							
12. Allows urine to flow by gravity into shallow pan or toilet							
Student-Specific (Steps 13–15 need to be individualized for each student.)							
13. If ordered, gently press bladder to help empty							
14. Pinches catheter and withdraws slowly when urine stops flowing							
15. Stops and waits until all urine has drained if urine begins to flow again during removal							
16. Removes gloves and washes hands							
17. Assists student in dressing							
18. Puts on gloves, measures and records urine volume, disposes of urine, and cleans equipment and stores in home container							
19. Washes hands							
20. Documents procedure and observations							
21. Reports any changes to family							

Checklist content approved by:

Parent/Guardian signature _____ Date _____

Indwelling Catheter

I. Purpose

Indwelling urinary catheters may be necessary after hospitalization and/or surgical procedures. A retention or Foley catheter is introduced through the urethra into the bladder. The retention catheter contains a smaller tube within the larger tube. This smaller tube is connected to a balloon near the insertion tip. After the catheter is inserted, the balloon is inflated with water to hold the catheter in place in the bladder. The Foley catheter has two openings at the end, one to drain the urine, the other to inflate the balloon.

Catheters are sized by the diameter of the lumen and labeled by the term French (Fr.). The larger the number the larger the lumen (e.g., 8F, 10F, 12F). The balloons of retention catheters are sized by the volume of fluid used to inflate them. Students usually require a 5-milliliter (ml) balloon.

II. Suggested Settings

As with all medical conditions, every effort should be made to protect the student's privacy. Procedures such as emptying the urinary collection bag can be done in regular toilet facilities in the school or the nurse's office or any other environment where the student is assured privacy.

III. Suggested Personnel and Training

A health assessment must be completed by the school nurse. State nurse practice regulations should be consulted for guidance on delegating health care procedures.

Care of an indwelling catheter may be managed by the school nurse, lawful custodian, teacher aide, or other staff person who has general training in the indwelling catheter of the student. General training should cover the student's specific health care needs, potential problems, and how to obtain assistance should problems occur.

The basic skills checklist can be used as a foundation for competency-based training in appropriate techniques. The checklist outlines specific procedures. Once the procedures have been mastered, the completed checklist serves as documentation of training.

IV. Individualized Health Care Plan: Issues for Special Consideration

Each student's Individualized Health Care Plan (IHCP) must be tailored to the individual student's needs. The following section covers the procedure for monitoring an indwelling catheter and possible problems and emergencies that may arise. It is essential to review the procedure before writing the IHCP.

A sample IHCP and Anticipated Health Crisis Plan are found in Appendix A. These may be

copied and used to develop a plan for each student. For a student who requires an indwelling catheter, the following items should receive particular attention:

- Ready access to private environment.
- Medications that would effect urine color, quantity.
- Student independence in emptying catheter bag.
- Fostering independence in performing the procedure, dependent on the student's ability.
- Baseline status including urine color and amount.
- Flexible schedule for emptying catheter bag to accommodate classroom schedule, field trips, etc.
- Student's tendency to infection.
- Latex Allergy Alert. (See pp. 5-7 of "Allergies" section).
- Universal Precautions (See Appendix B).

V. Possible Problems

Observations	Reason/Action
Bleeding from the urethra	*This may be due to trauma to the urethra or urinary tract infection. Contact lawful custodian and physician.*
Cloudy urine, mucus, blood, foul odor, color changes in the urine	*This may be due to a bladder infection. Always report to lawful custodian any changes in the student's usual urine appearance and output.*
Urine output less than 1ml/kg of body weight per hour	*Notify lawful custodian and/or physician.*

Monitoring an Indwelling Catheter

Procedure	Points to Remember
1. To empty the drainage bag:	
• Wash hands and put on gloves.	
• Open valve or clamp on urinary drainage bag and allow contents of bag to drain into a urinal or other collection device.	
• Do not allow tubing on drainage bag to touch collection device.	*Bacteria on the collection device could be transferred to the urinary collection system, which could result in a bladder or kidney infection.*
• Close the clamp or valve on the urinary collection bag.	
• Measure urinary output from bag and dispose of urine in toilet.	
• Dispose of gloves and wash hands.	
2. Observe and document on the health record or on the student's log the color, amount, appearance of urine each time the drainage bag is emptied.	
3. Monitor amount of urine in the urinary collection bag every 2 hours.	*Urine output should be at least 1 ml per kg per hour. A student who weighs 20 kg should have at least 20 ml of urine per hour. If less than this amount of urine is noted in the student, the school nurse and/or the lawful custodian should be notified.*
4. Clamp the tubing whenever the drainage bag is lifted higher than the student's bladder.	*This will prevent reflux of the urine into the bladder.*
5. Any blood or discharge from the urethra or any change in the student's urine should be immediately reported to the school health nurse and/or the lawful custodian.	*Blood, discharge, change in urine could be a sign of trauma to or infection of the urinary system.*

NOTE: Only qualified persons (i.e., licensed nurse) should reinsert or remove an indwelling catheter and only with a physician's order. [6]

I. Purpose

An external urinary catheter is used to keep the clothing dry in cases of incontinent male students or male students with poor control of voiding. Incontinence is a condition in which urine overflows the bladder and dribbles out the urethra.

II. Suggested Settings

The removal and application of a condom-type external urinary collection device is ordinarily done outside school hours. However, if done in school setting, regular toilet facilities can be used.

III. Suggested Personnel and Training

Removal and application of an external urinary catheter may be performed by the school nurse, lawful custodian, teacher aide, or other staff person who has general training in external urinary catheters. General training should cover the student's specific health care needs, potential problems, and how to obtain assistance should problems occur.

IV. Individualized Health Care Plan: Issues for Special Consideration

A sample Individualized Health Care Plan (IHCP) and Anticipated Health Crisis Plan are found in Appendix A. These may be copied and used to develop a plan for each student. For a student who requires an external urinary catheter, the following items should receive particular attention: particular attention:

- Fostering independence in performing the procedure, depending on the student's ability.
- An extra set of clothing should be kept in the educational setting.
- Flexible timing of urinary drainage to accommodate school schedule.
- Latex Allergy Alert. (See pp. 5-7 of "Allergies" section).
- Universal precautions. (See Appendix B)

V. Possible Problems

Observations	***Reason/Action***
Bleeding from the urethra	*This may be due to trauma to the urethra or urinary tract infection. Contact lawful custodian and physician.*
Cloudy urine, mucus, blood, foul odor, color changes in the urine	*This may be due to a urinary tract infection. Always report to lawful custodian any changes in the student's urine appearance and output.*

Skin of penis irritated	*Remove external catheter and put diapers on the student until skin clears.*

General Information Sheet

Students With External Urinary Catheters

Dear (Teacher, Lunch Aide, Bus Driver, etc.):

_____ (student) has a condition that requires an external urinary catheter. This is a simple and safe way of preventing urinary accidents when student is unable to control emptying his bladder. The penis is covered by a condom that is attached to a tube that is attached to a bag. The urine flows from the condom through the tube into the bag.

The student or another person empties the bag 3 or 4 times a day. This is usually done in the bathroom or health office. The condom is held in place by tape so that it should not come off.

The student's routine may require some modifications to participate in physical education or other school activities. Special planning may be needed to set aside time to empty the bag during field trips and other activities. This procedure should be done in a private place.

The following staff members have been trained to deal with any problems that may arise with this student.

_____

_____

_____

For more information about the procedure or the student's needs, consult the school health nurse or lawful custodian. [7]

Application and Removal of External Catheter

Procedure	Points to Remember
1. Wash hands.	*Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.*
2. Assemble equipment • Skin adhesive spray or tincture of benzoin and cotton tipped applicators • Adhesive remover • One-inch wide elastic non-irritating water proof tape • Condom-type urine collection device • One-inch wide surgical tape • Scissors • Paper towels • Urinary drainage bag or leg bag without flutter valve	
3. Explain the procedure to the student at his/her level of understanding. Encourage the student to participate as much as possible.	*By encouraging the student to assist in the procedure, the caregiver is helping the student achieve maximum self-care skills.*
4. Position the student.	*The external catheter may be applied while the student is sitting, standing, or lying.*
5. Remove previously applied urinary collection device as follows: • Carefully clip condom and tape near junction of the penis. • Pull condom and tape off gently.	
6. Inspect skin of penis; if it is irritated, DO NOT apply collection device until area clears.	*Disposable diapers can be used until skin clears.*
7. If necessary, cleanse shaft of penis and perineal area with soap and water. Dry area thoroughly.	*Old adhesive must be removed so that new adhesive will adhere well.*

8. If necessary, cleanse shaft of penis and perineal area with soap and water. Dry area thoroughly.

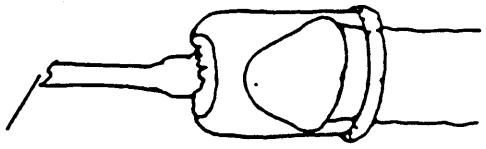
Cleansing reduces skin irritation, odor, and possibility of infection.

9. Make a small hole in the center of the paper towel and slide over penis to base covering pubic hair.

Paper towel must cover pubic hair to protect it from adhesive spray.

10. Roll condom-type collection device onto glans of penis, leaving 1/4 to ½ inch space between the end of the tubing and the end of the penis.

Space is left to prevent irritation from plastic insert rubbing against glans. Space also allows for elongation of penis during an erection.



Connects to urinary drainage bag or leg bag.

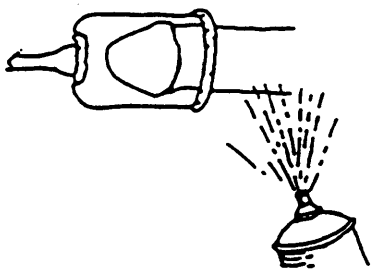
11. Holding condom in place on glans:

    a. Spray thin layer of adhesive around entire shaft of penis and allow it to become "tacky".

    OR

    b. Apply tincture of benzoin to shaft of penis (not on glans) with cotton-tipped applicators and allow the benzoin to dry.

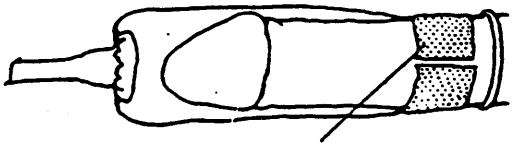
Condom prevents contact of spray on glans.



12. Unroll condom-type collection device to cover shaft of penis.

13. Place a strip of the 1 inch elastic non-irritating waterproof tape around the condom-type collection device at the base of the penis, but not covering the ring of the condom. DO NOT OVERLAP THE TAPE.

Don't wrap tape completely around the penis. *Overlapping tape may cause constriction of blood supply to penis.*



Elastic non-irritating tape

14. Wash hands

15. Document procedure on student log.

External Catheter
Skills Checklist

Student's Name:_____

Person Trained:_____

Position:_____ Instructor:_____

		Demo Date	Return Demonstration Date	Date	Date	Date	Date	Date
A.	States name and purpose of the procedure							
B.	Identifies supplies:							
1.	Skin adhesive or tincture of benzoin							
2.	Cotton tipped applicators							
3.	Adhesive remover							
4.	1" surgical tape							
5.	Scissors							
6.	Paper towels							
7.	Urinary drainage bag without flutter valve							
8.	1" elastic waterproof tape							
9.	External catheter collection device							
C.	Steps							
1.	Assembles supplies							
2.	Washes hands							
3.	Explains procedure to student and encourages participation							
4.	Positions student							
5.	Removes old external urinary catheter							
6.	Inspects penis							
7.	Cleanses penis as necessary							
8.	Places paper towel on penis							
9.	Rolls condom onto penis							
10.	Applies adhesive							
11.	Covers penis with condom							
12.	Places tapes on condom and cuts ring							
13.	Attaches condom to drainage bag							
14.	Documents procedure and student's skin condition							

9

Checklist content approved by:

_____ _____

Parent/Lawful Custodian Date

Peritoneal Dialysis

PURPOSE

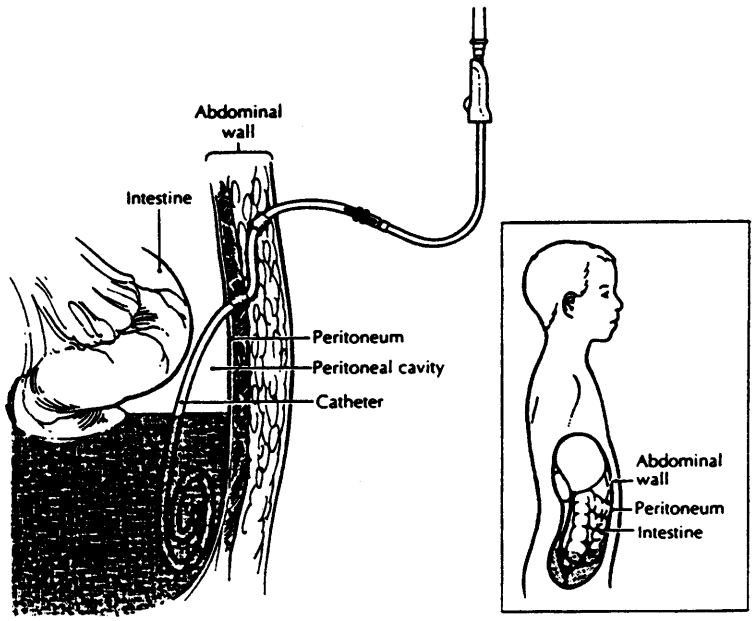
When a student's kidneys do not function properly (i.e., renal failure), that student may have problems with too much fluid and salt, high blood pressure, and the buildup of toxic waste products. There are two methods of treating the student with renal failure: dialysis and kidney transplantation. *Dialysis* is a therapy that uses a filter to get rid of body waste products and excess fluid. There are two types of dialysis: hemodialysis and peritoneal dialysis.

Peritoneal dialysis is the procedure in which dialysis occurs using the abdominal lining as the filter for waste products. There are two forms of peritoneal dialysis:

1. *Continuous Ambulatory Peritoneal Dialysis (CAPD)* is carried out continuously throughout each 24-hour period. A solution called dialysate is instilled by gravity through a catheter into the abdominal space and drained out, by gravity, at regular intervals (i.e., usually four to six times a day).
2. *Continuous Cycling Peritoneal Dialysis (CCPD)* is done over a 12-hour period, usually at night. A machine is set to instill and drain the dialysate at timed intervals (i.e., usually six cycles in a 12-hour period). Depending on the student's comfort, the peritoneal cavity may or may not be left full of dialysate during the 12 hours that he or she is not undergoing CCPD.

A peritoneal dialysis catheter is placed surgically in the abdomen. It is tunneled under the skin and has one or two cuffs attached. The cuffs help to keep the catheter in place and to stop bacteria from traveling along the catheter from the skin into the abdominal cavity. The end of the catheter that shows outside the body has either a cover or a length of tubing with a rolled-up empty dialysate bag attached. The bag is tucked into the student's clothing or in a carrying pouch.

The catheter always must be protected and covered by clothing to prevent tugging or pulling. If the catheter is tugged or pulled, a break in the system or skin tearing could occur.



The exit site (i.e., where the catheter comes out through the skin of the abdomen) usually is covered by a small 2" × 2" gauze and held in place with nonabrasive tape after antibiotic ointment or spray has been applied directly to the exit site.

There are two main complications of peritoneal dialysis: infection and abdominal membrane failure. Repeated peritoneal infections can lead to peritoneal membrane failure, and, eventually, peritoneal dialysis will no longer be a treatment option for the student.

SUGGESTED SETTINGS

As with all medical conditions, every effort should be made to protect the student's privacy. Procedures such as dialysate exchange or dressing change must be carried out in the health room or another clean, private room free from interruptions. The student can participate in school activities, but participation in swimming and physical education activities must be decided on an individual basis and approved by the student's physician.

SUGGESTED PERSONNEL AND TRAINING

A health assessment must be completed by the school nurse. State nurse practice regulations should be consulted for guidance on delegating health care procedures.

Any school personnel who have regular contact with a student with a peritoneal dialysis catheter must receive general training that covers the student's specific health care needs, potential problems, and how to implement the established emergency plan.

Because the technique for performing peritoneal dialysis must be adhered to rigidly, only personnel with competency-based training should perform this procedure. The training in this technique usually takes place in the dialysis unit responsible for the student's care. Those chosen for training are selected by the caregivers and the family. Changing the dressing at the exit site can be performed by a registered nurse using a sterile technique. The goal is to keep the skin around the catheter site clean and dry. Skin breakdown can eventually lead to peritonitis (i.e., abdominal infection).

THE INDIVIDUALIZED HEALTH CARE PLAN: ISSUES FOR SPECIAL CONSIDERATION

Each student's IHCP must be tailored to the individual's needs. The following section covers the possible problems and emergencies that might arise for a student with a peritoneal dialysis catheter. It is essential to review it before writing the IHCP.

A sample plan is included in this manual. It may be copied and used to develop a plan for each student. For a student with a peritoneal dialysis catheter, the following items should receive particular attention:

- The school nurse should be aware of the student's underlying condition and potential problems associated with the condition or treatment
- School staff who have regular contact with the student should be aware that the student has a peritoneal catheter
- Fever, nausea, vomiting, and abdominal pain must be reported to the family, physician, or dialysis unit
- Medication requirements (Some students may require additional support and supervision.)
- Diet restrictions, most significantly foods with high potassium content (Some students may require additional support and supervision.)
- Susceptibility to infections, especially chicken pox and peritonitis
- Restrictions about touching the tubing or the dressing
- Activity restrictions
- Latex allergy alert
- Universal precautions (Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.)

Possible Problems for the Student Requiring Peritoneal Dialysis that Require Immediate Attention

Observation	***Reason/Action***
Exit site dressing falls off	*Using sterile technique, apply sterile 2" × 2" split gauze around the catheter where it exits skin. Cover catheter and gauze with a second gauze. Secure with nonabrasive tape and notify family.*
Catheter is pulled or tugged	*Check catheter for any leaks or breaks in the tubing. Using aseptic technique, take dressing off, and check exit site for any indication of trauma or tears in the skin. If any leaking or trauma has occurred, notify family or dialysis unit immediately. Cover affected areas with sterile dressing.*
Cover on the end of the catheter comes off	*Cover the catheter end with sterile gauze. Make sure roller clamp has remained tight and dialysate is not leaking. If clamp is open, close it. Notify family.*
Tubing has become disconnected	*If the catheter and the tubing have disconnected, cover open end of catheter with a sterile dressing. Stop the flow of dialysate from the catheter by bending the catheter. Tape the folded, bent catheter to stop dialysate flow. Call family or dialysis unit immediately.*
Student complains of abdominal pain, fever, nausea, vomiting	*Have student rest. Take vital signs.* *Call family or dialysis unit immediately. (Abdominal infection, or peritonitis, can happen within a few hours.)* *This is a potential emergency. Be prepared to activate the emergency plan.*

Possible Problems that Require Attention for Any Student with Renal Failure

Observation	Reason/Action
Student complains of chest pain, numbness in face or limbs, and generalized weakness	*Most students on dialysis have dietary restrictions on potassium-high foods. A high level of potassium in the blood is an* ***emergency.*** *A high level of potassium in the blood interferes with the heart muscle's pumping action, causing irregular heartbeat, and may lead to cardiac arrest.* *Activate the emergency plan.* *Call the family or physician.*
Student complains of shortness of breath	*The student may have or may be developing fluid in the lungs. Have the student sit and rest for 3 minutes. Check vital signs and document. If difficult breathing continues or increases, activate the emergency plan and notify the family. Have the student remain in a sitting position, leaning forward over a table or chair to facilitate ease of respiration while waiting for the ambulance.*
Student complains of sudden onset of localized pain, usually felt while moving or walking	*Students with renal failure often have severe bone disease and may experience broken bones with even a minor injury. Some students' bones may become very brittle.* *Document location of pain and assess need for immobilizing area of pain.* *Activate the emergency plan and notify the family.*

General Information Sheet
Students with Peritoneal Dialysis Catheters

Dear (teacher, lunch aide, bus driver):

_____ (Student's name) has a condition in which the kidneys do not function properly. He or she requires a peritoneal dialysis catheter. This is plastic tube that has been placed to surgically into the student's abdomen to help remove waste products from the body.

The student will have a catheter closed with a cover or connected to a special fluid solution bag. The tubing and fluid bag are covered by the student's clothing. No one should touch the catheter or bag unless a problem occurs. Routine care of the dialysis catheter tubing will be carried out at home or in the health room, unless an emergency occurs.

Most students with peritoneal dialysis catheters are able to participate activities. participation in swimming and physical education activities must be decided in school or individual basis by the student's physician. Students with peritoneal dialysis catheters should avoid significant blunt trauma to their abdomen or situations in which the tubing might be pulled.

All staff who have contact with the student with a peritoneal dialysis catheter should be familiar with the emergency plan and how to initiate it.

The following staff members have been trained to deal with any problems that may arise with this student:

_____

_____

_____

_____

For more information about peritoneal dialysis catheters or the student's needs, consult the school nurse or family. [10]

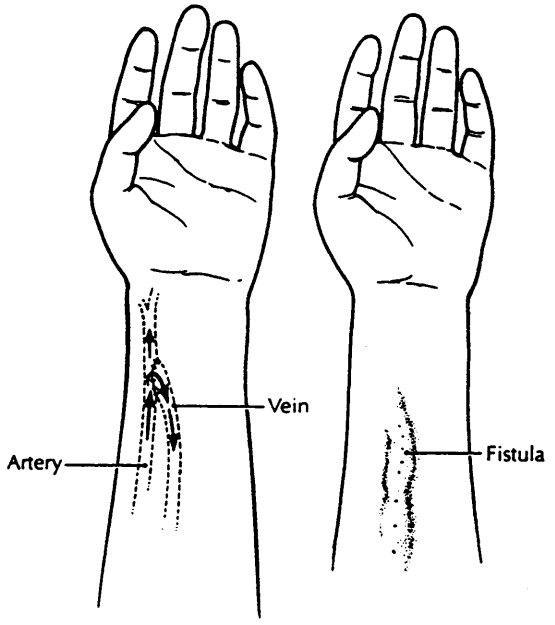
HEMODIALYSIS

PURPOSE

When a student's kidneys do not function properly (i.e., renal failure), that student may have problems with too much fluid and salt, high blood pressure, and the buildup of toxic waste products. There are two methods of treating the student with renal failure: dialysis and kidney transplantation. *Dialysis* is a therapy that uses a filter to get rid of body waste products and excess fluid. There are two types of dialysis: hemodialysis and peritoneal dialysis.

Usually, a student on hemodialysis is treated for 3 hours at a time, three times a week. During hemodialysis, the student's blood is circulated outside the body through a filter called a *dialyzer*, which allows small molecules and water to pass through a semipermeable membrane. To perform hemodialysis, an access to the student's blood is needed. The most frequently created access is the arteriovenous fistula. A fistula is created when an artery and a vein are surgically joined, so that arterial blood flows through the vein. The vein becomes enlarged and thick, and large needles can be inserted and removed with each hemodialysis treatment. The most common location for a fistula is in the wrist, but it also can be located in the upper arm or thigh. Hemodialysis is performed in the home or hospital or dialysis unit by specially trained nurses and physicians.

FISTULA CARE



The goal of fistula care is to ensure that the fistula remains patent (i.e., open) and has adequate blood flow. The student already may be aware of how to check fistula patency. Patency of the fistula should be checked several times a day by lightly placing fingers over the fistula to feel a vibration or by placing a stethoscope over the fistula and listening for a loud buzzing sound. The vibration or buzzing is called the *bruit*. If the student notices any changes in the bruit, he or she should notify the people identified in the emergency plan. Anything that reduces blood flow or causes constriction, narrowing, or blocking of the fistula area should be avoided (e.g., wearing a watch and bracelets, carrying heavy objects for long periods of time, sleeping on the area with the fistula, wearing dressings or tape that surround the limb). Blood drawing and blood pressure checks should *not* be done on the arm or leg on which the fistula is located.

SUGGESTED SETTINGS

As with all medical conditions, every effort should be made to protect the student's privacy. Checking the patency of a fistula that is located in an arm can be performed in any setting. Checking the patency of a fistula that is located in a thigh requires a private setting, such as the health room.

SUGGESTED PERSONNEL AND TRAINING

A health assessment must be completed by the school nurse. State nurse practice regulations should be consulted for guidance on delegating health care procedures.

The student with an arteriovenous fistula is able to participate in school activities. Participation in physical education and classes in which sharp equipment is used by the student should be decided on an individual basis and specific activities should be approved by the student's physician. Fistula care should be done by a registered nurse with proven competency-based training in appropriate techniques and problem management. Any school personnel who have regular contact with a student who has a fistula must receive general training that covers the student's specific health care needs, potential problems, and how to implement the established emergency plan.

THE INDIVIDUALIZED HEALTH CARE PLAN: ISSUES FOR SPECIAL CONSIDERATION

Each student's IHCP must be tailored to the individual's needs. The following section covers the possible problems and emergencies that may arise for a student with a fistula. It is essential to review it before writing the IHCP.

A sample plan is included in this manual. It may be copied and used to develop a plan for each student. For a student with a fistula, the following should receive particular attention:

- The student's underlying condition and potential problems associated with the condition or treatment
- School staff who have regular contact with the student should be aware that the student has a fistula and be familiar with the baseline appearance of the fistula and vibration of the bruit
- Report fever and/or pain in the fistula to the family or physician
- Report loss of bruit or bulging of the fistula to the family and physician
- Medication requirements (Some students will require additional support and supervision.)
- Student-specific diet restrictions, most significantly foods with high potassium content (Some students will require additional support and supervision.)
- Activity restrictions
- Susceptibility to infections, especially chicken pox
- Latex allergy alert
- Universal precautions (Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.)

School personnel (e.g., teachers, principals) should consider the following issues when working with a student needing hemodialysis:

- Consider using tape recorders and computers if fistula placement affects student's ability to write.
- Reduce amount of written homework.
- Be aware of frequent hospitalizations.
- Be aware of dialysis schedule.
- Schedule subjects flexibly during dialysis time.
- Prepare textbooks, workbooks, and worksheets for hospital tutor.
- Give credit for tutorial attendance.
- Monitor student performance in class and with hospital tutor.
- Arrange time for make-up work and tests.
- Assign home tutor when illness prevents student from attending school.
- Evaluate performance and review work after long absence.
- Make outlines and teacher's notes available to student.
- Modify amount of work expected by use of teacher–student contracts to attain realistic educational goals.
- Be aware of fatigue.
- Avoid after-school tutorial sessions.
- Provide access to school elevator in the event of fatigue or bone disease.

Possible Problems for the Student Requiring Hemodialysis

Observation	***Reason/Action***
Oozing or bleeding from a previous needle site	*The formed scab from the last needle puncture has come off. Put on gloves and apply direct pressure to the oozing site using a folded 2" x 2" gauze. Bleeding should stop within 10 minutes. Apply only enough pressure to stop the oozing of blood yet still feel the bruit. Once bleeding has stopped, apply a small Band-Aid.*
Trauma to the fistula	*If the student gets a cut into the fistula, the blood will pump out in a spurting fashion. Put on gloves and apply pressure with sterile gauze (if available) directly to the bleeding site. If bleeding cannot be controlled, apply a tourniquet above the fistula and* ***activate the emergency plan.*** *Arterial blood has been rerouted to the vein and the student could lose a large quantity of blood in a very short period of time.*
No bruit (i.e., vibrations, buzzing sound) when fistula is palpated or listened to with a stethoscope	*If fingers are used to palpate the bruit and nothing is felt, use a stethoscope to listen for a bruit. Have the student lie down. Check the student's blood pressure. If blood pressure is low or bruit still cannot be felt, call the dialysis unit or the family.*

Possible Problems that Require Immediate Attention for Any Student with Renal Failure

Observation	***Reason/Action***
Student complains of chest pain, numbness in face or limbs, and generalized weakness	*Most students on dialysis have dietary restrictions on potassium-high foods. A high level of potassium in the blood is an* ***emergency.*** *A high level of potassium in the blood interferes with the heart muscle's pumping action, causing irregular heartbeat, and may lead to cardiac arrest.* *Activate the emergency plan.* *Call the family and physician.*
Student complains of shortness of breath	*The student may have or may be developing fluid in the lungs. Have the student sit and rest for 3 minutes. Check vital signs and document. If difficult breathing continues or increases, activate the emergency plan and notify the family. Have the student remain in a sitting position, leaning forward over a table or chair to facilitate ease of respiration while waiting for the ambulance.*
Student complains of sudden onset of localized pain, usually felt while moving or walking	*Students with renal failure often have severe bone disease and may experience broken bones with even a minor injury. Some students' bones may become very brittle due to ineffective calcium absorption.* *Document location of pain and assess need for immobilizing area of pain. Activate the emergency plan and notify the family.*

General Information Sheet

Students with Hemodialysis Fistulas

Dear (teacher, lunch aide, bus driver):

_____ [Student's name] has a condition in which the kidneys do not function properly. This student requires a hemodialysis fistula, which is a surgical joining of an artery and a vein in his or her arm or thigh. The fistula is used to remove waste products from the blood during hemodialysis. This student's fistula is located _____.

The fistula may be covered by the student's clothing. If the fistula is on an arm, no pressure or tight-fitting objects (e.g., watches, bracelets) should be put on the arm with the fistula. The student should avoid bumping the area around the fistula. Routine care of the fistula will be carried out at home or in the health room, unless an emergency occurs.

The student with a hemodialysis fistula is able to participate in school activities. Participation in physical education activities and classes in which sharp equipment is used by the student should be decided on an individual basis, and specific activities should be approved by the student's physician.

All staff who have contact with the student who has a fistula should be familiar with the emergency plan and how to initiate it.

The following staff members have been trained to deal with any problems that may arise with this student:

_____

_____

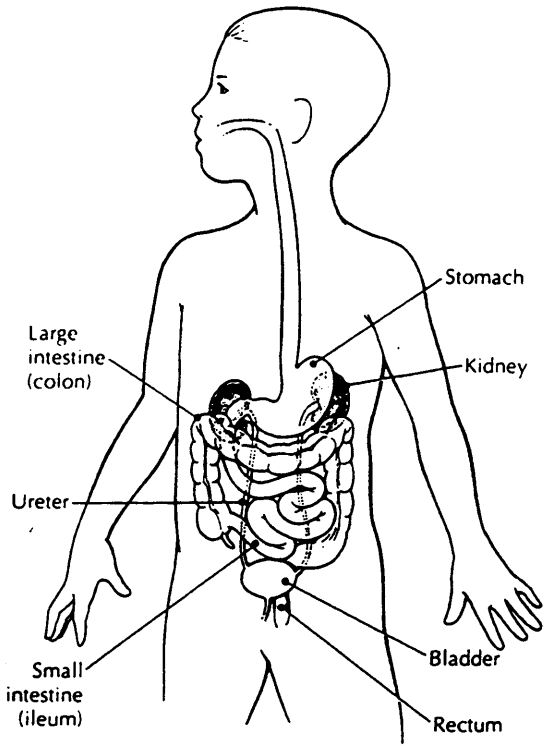
_____

For more information about a hemodialysis fistula or the student's needs, consult the school nurse or the family. 11

URINARY SYSTEM—STRUCTURE AND FUNCTION

The urinary system filters water and waste material from the blood and removes it from the body as urine.

The *kidneys* are two fist-size organs, one on each side of the spine at the back of the upper abdomen, that regulate the amount of water in the body. Ninety percent of the water that the kidneys remove from the blood is recycled back into the blood after waste is filtered out. The kidneys also regulate blood pressure, growth, calcium absorption, and red blood cell production.



The *blood vessels* include renal arteries that carry blood from the main artery to the kidneys, where waste is filtered out, and the renal veins that take cleansed blood away from the kidneys.

Ureters are narrow tubes that carry the urine from the kidneys to the bladder.

The *bladder* is a reservoir for storing the urine until it is ready to be discharged from the body.

The *urethra* is a tube leading from the bladder to the outside opening of the body through which urine is discharged, and the *meatus* is the external opening where urine comes out. In girls, it is between the labia, just above the vagina; and in boys, it is at the tip of the penis.

PURPOSE

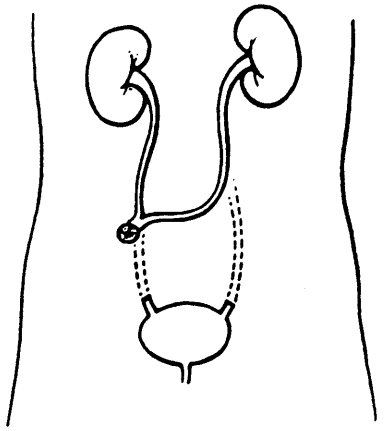
A urostomy, or urinary diversion, is an artificial site for urine to come out of the body. A urostomy is made by a surgeon when the bladder has been removed or bypassed. Like other types of ostomies, the stoma for the urostomy is on the abdomen, and the urine drains into a pouch or bag or may be eliminated by catheterizing the stoma.

The following are different types of urinary diversions (see illustrations on next page):

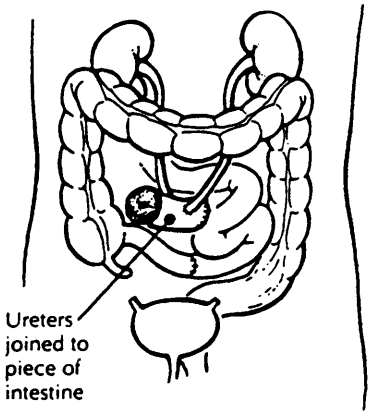
- *Urostomy or conduit:* The ureters are attached surgically to a piece of the intestine and then brought out to the surface of the abdomen to form a stoma. The appearance is like an ileostomy, but stool does not drain out. Some urostomies have a continence mechanism. The stoma for the continent urostomy (see illustration on next page) is much smaller than an ostomy that continually drains urine. It is necessary to catheterize the continent stoma at least four to five times per day.
- *Ureterostomy:* One or both of the ureters are brought directly out to the surface of the abdomen. Sometimes the ureterostomy stomas will be pale pink or look as if they are covered by skin. Because the bladder has been bypassed, the ureterostomy continuously drains urine into the pouch.
- *Vesicostomy:* A vesicostomy (see illustration on next page) is an opening from the bladder directly to the surface of the skin. Some vesicostomies are called "continent" if the surgeon has made a pouch out of the bladder under the skin to hold the urine inside it until it is drained with a catheter. Continent vesicostomies also have a

stoma. The more usual types of vesicostomy allow the urine to drain continuously into a pouch or dressing covering the stoma. Most vesicostomies are used as temporary means of draining urine.

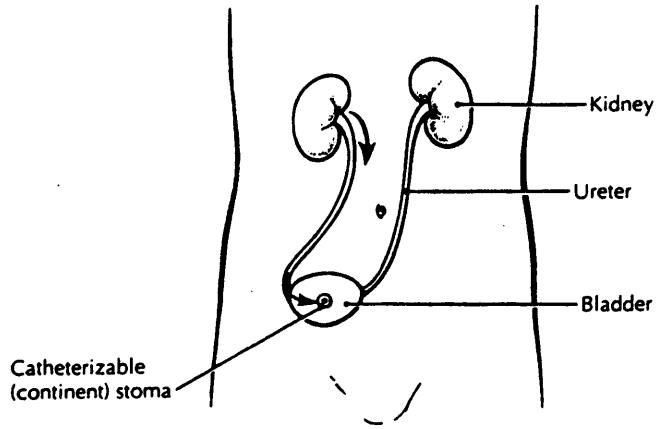
UROSTOMIES



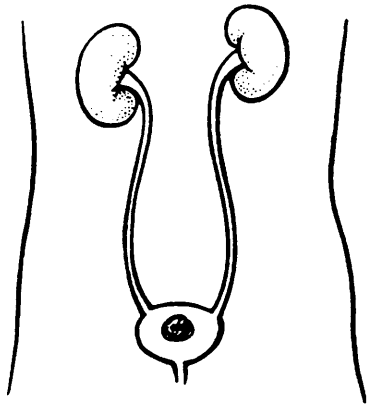
Single stoma



Intestinal conduit



Continent urostomy



Vesicostomy

STOMA CARE

The goal of stoma care is to keep the skin and stoma clean and healthy. Good skin care is essential as discharge from the ostomy can be irritating to the skin around the stoma. A properly fitting barrier should be applied around the stoma to protect the skin from any leakage.

A small adhesive bandage may be worn over a continent stoma. Some children prefer to wear nothing over the stoma.

SUGGESTED SETTINGS

Stoma care and catheterization should be done in a private place, such as a bathroom or the health room. The pouch should be emptied before it is full or if a leak occurs. Some students may want to have an extra change of clothes at school. The student should be able to participate in all school activities, including physical education.

SUGGESTED PERSONNEL AND TRAINING

A health assessment must be completed by the school nurse. State nurse practice regulations should be consulted for guidance on delegating health care procedures.

Stoma care and catheterization of the continent stoma can be done by the student or by the school nurse or other adult with proven competency-based training in appropriate techniques and problem management. Any school personnel who have regular contact with a student with a urostomy must receive general training that covers the student's specific health care needs, potential problems, and how to implement the established emergency plan.

The basic skills checklist on pages 41-42 can be used as a foundation for competency-based training in appropriate techniques. It outlines specific procedures step by step. Once the procedures have been mastered, the completed checklist serves as documentation of training.

THE INDIVIDUALIZED HEALTH CARE PLAN: ISSUES FOR SPECIAL CONSIDERATION

Each student's individualized health care plan should be tailored to the individual's needs. The following section covers the procedure for urostomy care as well as potential problems that may arise. It is essential that these guidelines be reviewed before writing the IHCP.

A sample plan is included in this manual. It may be copied and used to develop a plan for each student. For a student with a urostomy, the following items should receive particular attention:

- Student's ability for self-care (The student should have ready access to his or her equipment and private bathroom facilities with a sink. Each student should have enough equipment at school for at least 1 week.)
- Urostomies should not have an odor (An odor may indicate infection or a leak.)
- Access to a change of clothing in school
- Student's baseline status (e.g., urine volume, urine color)
- Latex allergy alert
- Universal precautions (Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.)

Possible Problems that Require Immediate Attention

Observations	***Reason/Action***
Odor, cloudy urine	*Fresh urine should not have an odor. If there is an odor, check for a leak around the stoma or in the pouch itself.* ***Urinary tract infections may cause the urine to have a strong smell.***
Leakage	*Check to see if the pouch is too full or has a leak. Other causes include inadequate or improper stoma care (e.g., inadequate adhesive) or incorrect pouch size for stoma. The continent stoma may be too full.*
Bleeding from stoma	*The stoma is irritated very easily. This may happen if it is rubbed too hard during cleaning or nicked with a fingernail. Usually the bleeding stops quickly. If it does not, apply gentle pressure and notify the family. If a large area of the stoma appears to be bleeding, notify the family or the physician.*
Irritation/skin breakdown around stoma; skin is raw or weeping	*Usually this is due to improper stoma care or to inadequate barrier on the skin. Also, check that the student is not using any preparation that might be causing an allergic reaction. Contact the family or physician.*
A rash with small red spots	*Student may have a yeast infection. Clean and dry the skin carefully and notify the family.*
Decrease or change in the flow of urine	*This may occur if the ureterostomy has narrowed. Notify the family of any change in urine flow.*

General Information Sheet

Students with Urostomies

Dear (teacher, lunch aide, bus driver):

_____ [Student's name] has a condition that requires a urostomy. This is an opening on the surface of the abdomen, which allows the urine to come out of the body when the student is unable to pass urine in the usual way. Depending on the student's condition, the opening will be in one of a number of parts of the urinary system. The opening, or stoma, is covered by a plastic pouch that serves as a container for waste until it can be emptied. The student or another person empties the pouch and cleans the stoma, when needed, in the bathroom. Some students catheterize their stomas.

Unless the student has a condition that otherwise interferes with his or her participation in physical education or other activities, there is no reason why he or she cannot participate fully. It is very difficult for a stoma to be injured. The pouch is firmly attached and should not come off under normal circumstances. The student should be allowed easy access to private bathroom facilities.

The following staff members have been trained to deal with any problems that may arise with this student:

_____

_____

_____

For more information about urostomies or the student's needs, consult the school nurse or the family.

Procedure for Changing a Urostomy Pouch

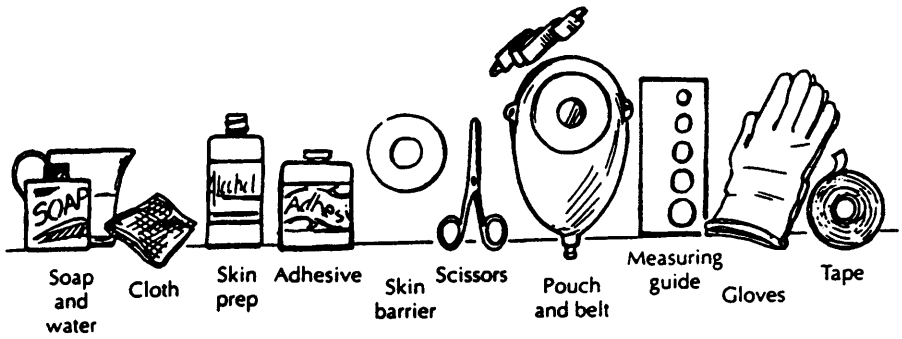
PROCEDURE

1. Wash hands.

POINTS TO REMEMBER

Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.

2. Assemble equipment:



- Soap and water
- Soft cloth or gauze
- Skin preparation
- Clean pouch and belt, if needed

Each student should have a complete setup at school with a spare pouch.
For ureterostomies, the pouch should have an antireflux valve to prevent urine from going back into the stoma.

- Disposable gloves, if pouch is to be changed by someone other than student
- Skin barrier
- Measuring guide
- Scissors, if specified
- Tape, if needed
- Adhesive
- Container to store used pouch
- Disinfectant solution for cleaning pouch

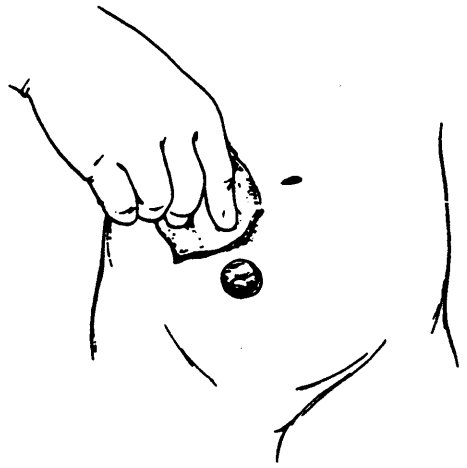
3. Explain procedure at the student's level of understanding.

By encouraging the student to assist in the procedure, the caregiver helps the student achieve maximum self-care skills.

4. Position the student.
5. Wash hands and put on gloves.
6. Empty contents of used pouch into toilet.
7. Carefully remove the used pouch and skin barrier by pushing the skin away from the pouch, instead of pulling the pouch off the skin.

If a skin barrier is used that requires fitting, measure stoma per student-specific guidelines.

8. Wash the stoma area using a clean cloth or gauze.

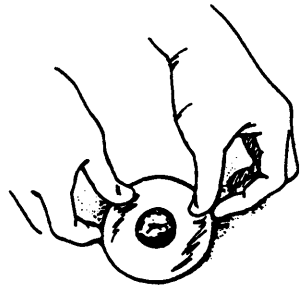


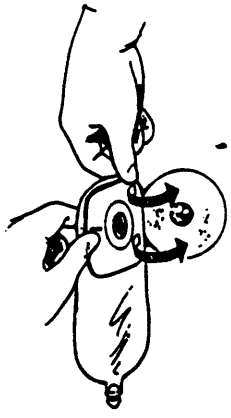
9. Cover the stoma with gauze or cloth and clean the skin around the stoma. **Do not scrub the stoma or the skin.**
10. Inspect skin for redness, rash, or blistering.

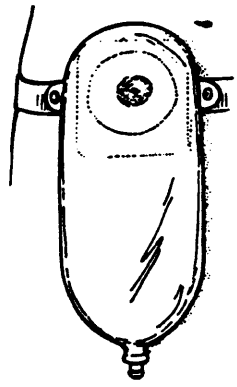
If there is skin irritation, check student-specific guidelines. Do not put medication, ointment, or adhesive on the damaged skin. Report skin irritation to school nurse and family.

11. Pat skin dry.

12. Place skin barrier on skin around stoma per student-specific guidelines.
13. Peel off backing of adhesive on the pouch or apply adhesive to pouch.
14. Remove gauze and dispose.
15. Remove gloves.
16. Center the new pouch directly over the stoma.







17. Firmly press the pouch to the skin barrier so there are no wrinkles or leaks. Attach belt if used.
18. Dispose of used pouch in appropriate receptacle.
19. Wash hands.
20. Document on log sheet that the procedure was completed. 12

If indicated, open the pouch to allow in a small amount of air. Then seal bottom if the pouch has a bottom drain.

Report to family any change in urine pattern.

Student's name: _____

Person trained: _____

Position: _____

Urostomy Pouch Change
Skills Checklist

Instructor: _____

Explanation/Return Demonstration	Expl./ Demo. Date	Explanation/Return Demonstration					
		Date	Date	Date	Date	Date	Date
A. States name and purpose of procedure							
B. Preparation:							
1. Identifies student's ability to participate in procedure							
2. Reviews universal precautions							
3. Completes at _____ time(s)							
4. Identifies where procedure is done (consider privacy and access to bathroom)							
5. Position for ostomy care: _____							
6. Identifies possible problems and appropriate actions							
C. Identifies supplies:							
1. Cleanser and water							
2. Soft cloth or gauze							
3. Skin preparation							
4. Clean pouch and belt, if needed							
5. Gloves							
6. Scissors and measuring guide							
7. Tape, if needed							
8. Adhesive							
9. Container to store used pouch							
10. Disinfectant solution to clean used pouch							
D. Procedure:							
1. Washes hands							
2. Assembles equipment							
3. Positions student and explains procedure							
4. Washes hands, puts on gloves							
5. Empties contents of pouch into toilet before removal							
6. Removes used pouch							
7. Washes the stoma area and places gauze over stoma							
8. Inspects skin for redness/irritation							
9. Dries stoma and skin							
10. Places skin barrier around stoma							
11. Applies adhesive to pouch or removes backing from adhesive; disposes of gauze							

(continued)

Format adapted from Children's Hospital Chronic Illness Program, Ventilator Assisted Care Program. (1987). *Getting it started and keeping it going: A guide for respiratory home care of the ventilator assisted individual.* New Orleans, LA: Author; adapted by permission.

Urostomy Pouch Change
Skills Checklist

Student's name: _____

Explanation/Return Demonstration	Expl./ Demo. Date	Explanation/Return Demonstration					
		Date	Date	Date	Date	Date	Date
12. Removes gloves							
13. Centers new pouch over stoma							
14. Presses pouch firmly against skin barrier to prevent leaks							
15. Attaches belt, if used							
16. Disposes of used pouch in appropriate receptacle							
17. Washes hands							
18. Documents procedure and observations							
19. Reports any changes to family							

Checklist content approved by:

Parent/Guardian signature _____ Date _____

Procedure for Catheterizing a Continent Urostomy/Vesicostomy

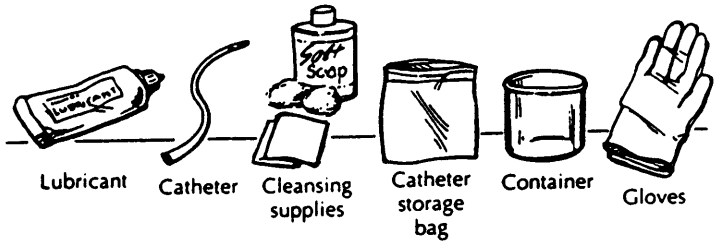
PROCEDURE

1. Wash hands.

POINTS TO REMEMBER

Anticipating the tasks to be done, the risk involved, and the personal protective equipment needed will enhance protection of both the caregiver and student.

2. Assemble equipment:



- Soap and water or alcohol-free towelette
- Disposable gloves, if stoma is to be catheterized by someone other than student
- Catheter
- Water-soluble lubricant
- Catheter storage bag
- Container to collect and dispose of urine if unable to perform procedure while student sits on toilet
- Small adhesive bandage or stoma covering

Each student should have enough equipment at school for at least 1 week.

3. Explain procedure at the student's level of understanding.

By encouraging the student to assist in the procedure, the caregiver helps the student achieve maximum self-care skills.

4. Position the student.

Student may be lying down or sitting.

5. Wash hands and put on gloves.
6. Lubricate catheter tip with lubricant.

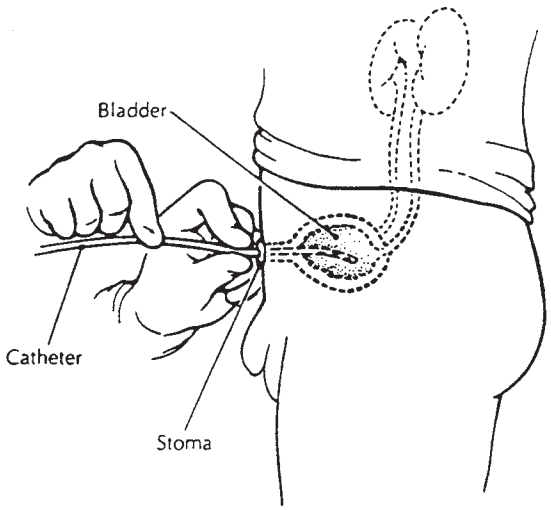
It is important to lubricate the catheter to ensure easy passage and prevent tissue trauma.

7. Wash the stoma using cleansing supplies.

8. Insert the catheter into the stoma until a flow of urine is passed.

   Insert the catheter approximately ½–1 inch further.

Make sure the other end of the catheter is in either a receptacle to catch urine or over the toilet.



9. Leave the catheter in the stoma until the flow of urine stops.

The flow of urine may be stopped by a mucus plug. The catheter should be removed and rinsed, lubricated, and reinserted. Sometimes the continent urostomy will need to be gently irrigated if there is presence of persistent mucus. A physician's order is needed for urostomy irrigation.

10. Slowly pinch the catheter and remove it from the stoma.
11. Remove gloves and wash hands.
12. Reapply adhesive bandage or stoma covering to stoma.
13. Put on gloves.
14. Measure and record urine volume if ordered. Dispose of urine.
15. Wash hands. Document on log sheet that the procedure was done.

Clean equipment and store in home container.

Report to the family any change (e.g., cloudy urine, mucus, blood, foul odor, color changes, unusual wetting between catheterizations). [14]

Continent Urostomy/Vesicostomy Catheterization
Skills Checklist

Student's name: _____

Person trained: _____

Position: _____

Instructor: _____

Explanation/Return Demonstration	Expl./ Demo. Date	Explanation/Return Demonstration					
		Date	Date	Date	Date	Date	Date
A. States name and purpose of procedure							
B. Preparation:							
1. Identifies student's ability to participate in procedure							
2. Reviews universal precautions							
3. Completes at _____ time(s) (in emergency, complete earlier rather than later)							
4. Completes where _____ (Consider privacy and access to bathroom)							
5. Position for catheterization: _____							
6. Identifies possible problems and appropriate actions							
C. Identifies supplies:							
1. Cleanser and water or alcohol-free towelettes							
2. Disposable gloves							
3. Type of catheter							
4. Lubricant (water soluble)							
5. Container for urine							
6. Small adhesive bandage or stoma covering							
7. Storage receptacle for catheter							
D. Procedure:							
1. Washes hands							
2. Assembles equipment							
3. Positions student and explains procedure							
4. Washes hands and puts on clean gloves							
5. Lubricates catheter and places on clean surface							
6. Washes stoma using cleansing supplies							
7. Inserts catheter into stoma until urine begins to flow							
8. Advances ½ inch–1 inch further							
9. Allows urine to flow by gravity into shallow pan or toilet							
10. Leaves catheter in until urine flow stops							
11. Pinches catheter and withdraws slowly							
12. Removes gloves and washes hands							

(continued)

Format adapted from Children's Hospital Chronic Illness Program, Ventilator Assisted Care Program. (1987). *Getting it started and keeping it going: A guide for respiratory home care of the ventilator assisted individual.* New Orleans, LA: Author; adapted by permission.

Student's Name: _____

Continent Urostomy/Vesicostomy

Catherization

Skills Checklist

Explanation/Return Demonstration	Demo Date	Date	Return Demonstration Date	Date	Date	Date	Date
13. Reapplies small adhesive bandage on stoma covering							
14. Assists student in dressing							
15. Puts on gloves, measures and records urine volume; disposes of urine, and cleans equipment and stores in home container							
16. Washes hands							
17. Documents procedure and observations							
18. Reports any changes to family							

10

Checklist content approved by

_____ _____

Parent/Lawful Custodian Date

NOTES

1. Information appearing in this section reprinted by permission from:

   Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J. S. (1997). *Children and youth assisted by medical technology in educational settings: Guidelines for care.* (2nd ed).Baltimore: Paul H. Brookes Publishing Co. All rights reserved. (Please refer to individual notes throughout the section for details concerning specific passages of text).

2. Ibid. (pp. 225-226). Pages 1- 8 of this section.

3. Information on pages 9-10 of this section adapted or reprinted from:

   Children's Hospital Chronic Illness Program, Ventilator Assisted Care Program. (1987). *Getting it started and keeping it going: A guide for respiratory home care of the ventilator assisted individual.* New Orleans, LA.

   Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J.S. (p. 339-340).

4. Information on pages 11-12 of this section reprinted from:

   Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J.S. (pp. 223-224).

5. Information on pages 13-14 of this section of this manual adapted or reprinted from:

   Children's Hospital Chronic Illness Program, Ventilator Assisted Care Program.

   Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J. S. (pp. 341-342).

6. Information on pages 15-17 of this section adapted from:

   Skale, N. (1992). "Indwelling urethral catheter." *Manual of pediatric nursing procedures* Baltimore: J. B. Lippincott Company. (pp. 466-471).

7. Format for information on page 20 adapted from:

   Porter, et. al. "General Information Sheets"

8. Information on pages 18-22 of this section adapted from:

   California State Department of Education. (1980). "Catheter, External urinary collection." *Guidelines and Procedures for Meeting the Specialized Physical Health Care Needs of Students.*

9. Information on page 23 of this section adapted from:

   Children's Hospital Chronic Illness Program. Ventilator Assisted Care Program.

10. Information on pages 24-28 of this section reprinted from:

    Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J.S. (pp. 209-213).

11. Ibid (pp. 204-208). Pages 29-33 of this section.

12. Ibid (pp. 245-249, 252-253). Pages 34-40 of this section.

13. Information on pages 41-42 of this section adapted or reprinted from:

    Children's Hospital Chronic Illness Program. Ventilator Assisted Care Program.

    Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J. S. (pp. 347-348).

14. Information on page 43-44 of this section reprinted from:

    Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J. S. (pp. 250-251).

15. Information on pages 45-46 of this section adapted or reprinted from:

    Children's Hospital Chronic Illness Program. Ventilator Assisted Care Program.

    Porter, S., Haynie, M., Bierle, T., Caldwell, T.H., & Palfrey, J. S. (pp. 349-350).